

Original

Before the
Federal Communications Commission
Washington, D.C. 20554

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APR 16 1998
FCC
In the Matter of
Proposal for Creation of the Low Power FM
(LPFM) Broadcast Service

FCC RM-9242

COMMENTS of David Hollfelder

Dear Author & FCC Reviewers

Forward

I can honestly say "one simply cannot ignore the certain presence of impending change", so in my interest for the betterment of my fellow man, I offer some vision so that others may see.

Herein lies the seeds of yet another "landmark" change in communications.

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Absence of Protection from "Domination" in a Free Market
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 - New technology and new found abilities with focus of attention to the local community.

Intro / Overview

- I) To start this comment / discussion, I've made every reasonable effort to avoid "naming & blaming", nor is any form of resentment/animosity in the purpose. Rather, it is a "step outside the box" review and recommendation to address real solutions. In my extensive investigation, it could be concluded that most discussions, scenarios & solutions I've seen offered thus far, appear to be reacting to "symptoms" with "band aid solutions" to what can be called, mere "parts" of what should be seen as a "big picture problem set", requiring a "big picture solution set".
- II) The LPFM/uB movement is one of these symptoms. LPFM/uB has spawned from a "Natural Law" process. LPFM/uB assessment, validation and acceptance will "no doubt" come into being since Statute Law cannot override, or be in direct contention with Natural Law.
 Simply stated, you cannot have a uniform, fair and enforceable law when the majority of the constituents are not protected / benefited, and to a substantial degree are adversely affected by it.
- III) It is assumed that all readers of this material are familiar with the content and scope of this issue, therefore in the interest of brevity & clarity, most technical and supporting case evidence details/descriptions have been left out.
- IV) *Licensing of LPFM/uB Broadcasting - at an effective power level.*
- V) To counter the platform of the commercial established community that LPFM/uB is "counter the their interests".
- VI) A perspective/perception that the FM broadcasting environment based on several full range of "major facts" in general, and hinged specific "major points" in particular.

Goals of this Commentary Document

- ***Licensing of LPFM/uB Broadcasting - at an effective power level***
With the rising visibility and momentum of the LPFM/uB movement, it has identified itself as a viable and serious form of broadcast communication, far beyond the "hobby toy" limits of what is now permitted. LPFM/uB has shown solid potential in high quality - low cost broadcasting in areas of equipment, qualified operation and programming, and the ability to build a listening audience.
- To recognize of need for review of the FM Broadcast as it serves today, and what possibilities are available in the future.
- Explore opportunities and improve FM service, to allow greater access for broadcasters for the benefit of the public community via:
 - 1) The Re-Introduction of Low Power FM as:
 - a) Microbroadcasting (heretofore referred to as "uB") power up to 50 Watts
 - b) Low Power FM (heretofore referred to as "LPFM") power over 50 Watts
 - 2) Enhancements for full power service
- Present the case that LPFM/uB is not "counter to their interests" as claimed by the commercial broadcast community.

- I) **Principal reason for the problems FM broadcast band - no "equitable" access,** (also known as no "universal" or no "equal" access) of a very similar nature to the "equal access" issues since the divestiture of the Bell System.

Some of the problems are as follows:

Exclusion

- a) "Dominance" of 1 class of service provider to the point that all others are virtually excluded.
- b) The discontinuance of low power licensing (less than 100 watts) in the late 1970s. Although FCC allows licensing of a 250 watt or higher-low power station, such licensing is virtually non existent except for rare "boosters & translators" (which are not broadcast radio stations in the traditional sense - but are repeaters of some other - usually full power station).
- c) The high cost of starting & running a FM radio station - of any kind (if you can even get one).
- d) The (virtual) "impossibility" to get an FM broadcast channel allocation (license).
- e) The "explosion" of "unlicensed" radio stations. Aside from a relatively few (and at great expense to the FCC) "high profile busts", the number of "unlicensed" radio stations in the FM band (most, if not all are less than 100 watts - more accurately stated, 30 watts or less), continues to rise at a unprecedented high rate. "Outlaw" radio stations exist throughout the world on all broadcast bands, but the individuals engaging in this activity are very, very few in number compared to the legal radio community. Such is not the case in the FM band. This "very much" higher than normal rate suggests that most would broadcast "legally" - if they could (any many more would also but will not do so illegally).

II) Proposed Near Term Solutions

- a) The FM Band has 100 channels. In a typical - large metropolitan area, about 20 are useable for full power stations (due to engineering /allocation constraints/requirements), or, about 20% utilization.
- b) LPFM/uB service, with proper engineering & located properly between properly spaced full power stations, as many as **Ten** LPFM/uB stations could go into service in these areas with extremely negligible (if any) interference, increasing the utilization from about 20% to 30% - a 50% increase in utilization!

II) Proposed Long Term solutions for the need for (much more) additional RF spectrum for the FM Band. Such is the case for virtually all other areas in communications.

Expanding the FM Broadcast Band -

- a) Specifically from the low band NTSC TV Channels 5 & 6 which will be surrendered after the HDTV transition.
- b) Begin requiring new FM receivers being sold (as soon as possible), to have this new "expanded band" receiving capability.

This is explained in further detail in "Guideline / Suggestions for Implementation"

This concept should come as no surprise since most the rest of the communications world is in need of (and in the process of) expanding their bandwidth and utilization capacities.

Major Facts of the Current FM Broadcasting Environment

1) FM / FM Stereo Broadcasting Works Well, is Popular, and is Efficient

FM broadcast is reasonably efficient and high quality - a "rare jewel" for an incumbent / legacy technology. The point here is that standard FM / FM Stereo broadcast as it is being done today is "here to stay".

2) Exhausted FM Broadcast Band

- a) The demand for broadcasting in the FM arena has outpaced what is available in its allotted band (RF spectrum), transforming what was once (nearly) a commodity, into very scarce and high priced real estate. The FM spectrum is virtually exhausted in most metropolitan areas preventing any more "full power" station use. Typically, about 20% of the FM band is useable in large metro area.
- b) The FM spectrum, however, can very well support a substantial amount low power broadcasting stations (LPFM/uB), when properly engineered & located centrally between properly spaced full power stations, and not cause interference to the said station's protected service contour (via new engineering rules for co-located and 1st adjacent channels for low power stations). With LPFM/uB, the band utilization can increase from the present 20% level to as much as 30% - a 50% increase.

3) RF Spectrum, The Owners, Regulators, & Users

The RF spectrum is much like a regulated utility. In principle, it is the property of the common public, and not the sole property of any one individual or organization. However, it can be recognized and accepted that the RF spectrum needs and has an appropriate regulator - the FCC. The FCC, for the most part, performs satisfactorily in its mission(s) and duties when not subject to undue and unintended pressures.

4) Market & Legislative Changes in Recent Years - Concentration of Financial Power and Influence

- a) Due to budgetary pressures from Congress, the FCC is now in the "revenue generating" business, much like the U.S. Postal Service. By creating a market driven pricing device such as auctions (for the few available channels), in a high and growing demand - no new supply environment, an extremely "overheated" economic situation has occurred that further supports the claims that FM broadcasting available to only to (for lack of better words) the "wealthiest of the wealthy".
- b) Most of this revenue generating process is being funded by the commercial station owners (today there are very few compared to years past), creating a "perceived" business relationship between the FCC and the commercial station owners in the eyes of the public in general, and the potential new comers to FM broadcasting in particular. In review recent events, commercial entities - most who are members of "broadcast organizations", get far more attention from and the FCC (supporting the perception of an inappropriate level of influence), than small budget potential broadcasters.

5) Difficult, if not Futile to Receive an FM Broadcast License (of any kind)

It is overly time consuming and costly for the intended user(s), and the FCC as well, to allocate channels for use (in most circumstances, a potential user, vying for an available channel, will expend a considerable amount of time, effort, & resource, and still not get the license to use that channel).

6) The Absence of Protection from "Domination"

- a) In what "was" intended to be a free market economy, the FM broadcast spectrum is "dominated" by "full power commercial stations". Such "full power" stations provide truly "superb" service for their intended purpose, albeit VERY expensive to start up and "keep the doors open" - to an astronomical degree (with dollar values in the tens of thousands to millions). With all that in mind, still, often the only way for commercial broadcasters to grow (a Natural Law of commerce), was to buy existing stations via the same financially exorbitant model described in paragraph #4.

- b) Citing "precedent" in a assumed "free market economy", the issue of "dominance", has always created a need for special "checks and balances" safeguards instituted so no one entity (or class of entities) will dominate or monopolize the market to the point where there's no other meaningful participants.

7) The (the adverse) Effect of Market & Legislative Events

- a) Through legislative events in recent years (i.e. FCC deregulation and the Telecomm Act of 1996) a mass consolidation of commercial stations has occurred "beyond expectation".
- b) Due to exhausted supply of RF spectrum, and market reactions (a Natural Law of economics) virtually ALL new "would be" broadcasters (non-commercial & commercial alike) are now "shut out" from a broadcast voice (except for the very small in number, & properly resourced entities in paragraph #4).

8) New Technology - the availability of Low Cost, "World Class" Broadcast Quality LPFM/uB equipment.

- a) Low Cost, "World Class" Broadcast Quality LPFM/uB equipment is readily available. With appropriate training & certification in accepted broadcast engineering practices (mentioned later in this paper), many owners / operators could acceptably broadcast either on a self-maintained basis, or obtain affordable engineering service.

9) Present the case that LPFM/uB is not "counter to their interests" as claimed by the commercial broadcast community.

Citing the continued success of broadcast TV in the face of CATV, DSS, and the Internet, the added diversification in TV programming has shown that it actually can foster improved content by being more responsive the audience, as the audience are given more "choice" and becomes less "captive".

The objections voiced by existing broadcasters is "expected". However, they are "unfounded".

10) LPFM and uB - Definitions and Culture

LPFM and uB are actually 2 separate, and very different broadcast vehicles:

First and Foremost

One Station (maximum) per Person or Organization per Major Geographical Area.

Organization being defined as either Commercial or Non-commercial (including foundational, etc), with the clear intent of preventing the LPFM class of stations from becoming multiple outlets of a national programming source. This point is further explained later in "The Culture of LPFM/uB".

Microbroadcasting (uB) service (50 Watts or less)

Engineering Aspects

- Primarily Non-Commercial and Community Based
- should not warrant "type classed" equipment because of its low power, high quality, low equipment engineering complexity, and the overall simple to maintain properties.
- This "uB" component of these new broadcast services is where the most demand will be.
- Offered as:
 - As a Primary Service (uB-1/ protected) - and subject to more operation (maintenance & service area coverage) & programming (on air) requirements
 - As a Secondary Service (uB-2) less operation & programming requirements, perhaps time sharing of channels (i.e. school/educational in daytime, community broadcaster at night)
 - As a Special Event Service (uB-3) With the inclusion of Special Event Service, Local "Entertainment", "Festivities", "Sports Events", "Amenities", "Local Traffic and Emergency Information/Assistance" would benefit via short range broadcasts to the immediate-nearby audience. These will be usually outdoor events or in indoor stadiums.
 - Lower powered, however the larger in number component of the LPFM/uB movement. These, somewhat follow Skinner's LPFM-2, LPFM-3, LPFM-4 descriptions.

The Culture of uB:

What can be seen behind the LPFM/uB movement is the PERSONAL involvement in "their" operations & programming of these (now "pirate") stations. It is the "PERSONAL involvement & close proximity" & "burning desire" nature of the founders that sets these stations apart from other areas in radio. Specifically, we need specifications to target this element, and "target out" any of those seeking to build an entity that creates the "silent or financial partner", or the "owner" who is rarely seen who has "lot of different stuff", handled by "managers" (who is driven by classical / world class, P&L, Return on Investment type principle).

Such Commercial and Foundational entities have their place and serve themselves and the public well. We just DON'T see LPFM as an appropriate place for "full blown" entrepreneurs, or ideology campaigners on a grand scale.

LPFM should be an "incubator" as such for those fledgling / experimental entities that would otherwise not have a medium in today's world where mass media has all but eliminated the micro media. If one should reach the point where they are now "ready for prime time", then they ought to pursue the service level appropriate for their needs. They then would be expected to leave LPFM and "hand over" the "incubator" to the next "dreamers".

In summary, specific tailoring to the "heart and soul" of the LPFM movement is in order, or the envisioned effect will be amiss. Any undesired effects will be very hard, if not impossible to fix as with the telecom act of 1996 as it relates to TV and Radio Ownership.

Possible words to the Effect

[The "owner / operator shall be in close involvement with the operations and program content, and in regular close physical proximity of the station". The station can NOT be a subsidiary or affiliate of any Commercial or Foundational organization, whereby the true owners (and drivers of the culture) are not "an integral part of the day to day activities".]

Note - It is this "uB" component, the 50w and less class, the explosion of the so called "unlicensed" stations showing the demand for licensed uB stations, that will create the most activity.

The demand for "uB" service merely comprises the "trigger" for what appears to be "eminent" change (already set in motion by market and deregulation/legislation forces).

LPFM & uB can and should have a place in the "legal" FM Broadcast Arena

Low Power FM (LPFM) service (51W through 3 KW - Skinner's Recommendation)

- Primarily Commercial Based in the traditional sense, and "can" be Community based
- should require "type classed" equipment.
(due its higher power and increased equipment engineering complexity compared to uB)
- as described by Skinner's LPFM-1 description
- higher power, but the lesser in number component of the LPFM/uB movement,

• **Guidelines / Suggestions for Implementation**

Acceptance and licensing of LPFM/uB via acceptable operation and programming

Freedom and Responsibility (good character & common sense)

NOTE- The following items are to be seen as pivotal for LPFM/uB acceptance in the public community, the broadcast community, and the FCC.

- a) Technical competence for LPFM operators (acceptable radio engineering practice)
Require basic competency in RF transmission principles, such as training and testing.
Offer ongoing support for operator-engineers as appropriate for their level of service.
- b) Programming - Winning Acceptance (acceptable radio programming practice)
Some of the so called "Pirate" radio stations have had somewhat of a "reputation" for:
 - Interference problems & poor signal quality. Inexperienced and untrained individuals

operating transmitters who are unaware of the inherent properties of RF in such as harmonics, over-modulation, spurious signals, etc. , and what services, in and out of the FM band may be effected (i.e. aviation).

- "extreme"/offensive programming of a cheesy, anarchic, sleazy, and hate nature (or have simply fallen prey to vice and hate groups) which has no business on public broadcast. As programmers of so called "Community Radio", we're assuming the role of "Ambassadors of Public Trust". To have "Freedom", one must also be "Responsible" in serving their community. By unknowingly or otherwise, presenting unqualified, unsubstantiated, and misinformation as "news" is a disservice to the community. Our communities don't need the additional "unrest".

New programmers will need and be required to get basic broadcast journalism training on an on going basis. "Purist" Free Radio proponents may (at first) object, however they will do very well "serving their cause" knowing they will be "better heard" via skills of proven - effective means.

- Foster individual initiative & the "Spirit of Serving Your Community"

Expanding the FM Broadcast Band -

- a) Specifically from the low band NTSC TV Channels 6 & 5 which will be surrendered after the HDTV transition. Propose the need to "early vacate" TV channels 6 & 5 via "highest priorities & incentives", creating advantageous opportunities to move them to either a UHF channel temporarily, (possibly to a UHF channel being vacated by a station moving to HDTV), or directly to HDTV. This will add 60 more FM channels. (Note- TV Channels 6 & 5 are located just below the present FM band.)
 - b) Begin requiring new FM receivers being sold (as soon as possible), to have this new "expanded band" receiving capability. Additionally, these receivers can be built with "higher selectivity" at minimal cost (with the high quality-low cost technology available today) to further the effort of higher utilization at minimal risk of interference.
- This effort can be approved & implemented can be carried out very expediently since no new standards need to be developed.

- Enhancements for Full Power Service - adding *new full power channels*

This plan allows for addition of a substantial number new of "full power" channels, while providing a substantial number of specific channels for LPFM/uB service (rather than just relying on "the luck of the draw" in finding a useable channel far enough away from 2 or more full power stations).

This should be seen as a "major selling" point for this whole cause - an effort that will work for the benefit of all.

This concept is in effect in most of the rest of the communications world is in need of (and in the process of) expanding their bandwidth and utilization capacities.

New Engineering Rules for Optimal Channel Allocation / Utilization

(for the proposed expansion area of the FM band)

No "basement", or "prime" areas in the band

The present non-commercial area of the band - a cluster of stations using the 1st 20 channels of the FM band for some intangible reason, have somewhat become known as the "basement" of the band. With improved channel / service allocation, similar to the rules used in AM (alternate channel, or groups of channels by service) should be implemented.

This would have the effect of:

- a) "Homogenizing" the band to attract more frequent "visits" by listeners to all areas of the band.
- b) Allow higher utilization of available channels while still adhering the location and adjacent channel spacing requirements.

The Local Area Microbroadcasting Coordinator - "LAMC" or "uBC" - a Zero Budget Impact for the FCC

The concept of the uBC can be envisioned as a effective, expedient, and low cost solution for local uB service management. The coordinator (or in very large local area, a committee if necessary) will be a volunteer, under the direction of the FCC, and with good working relationships with the broadcast community (large and small), will enable a "self regulation" environment, consisting of assigning, monitoring, reporting, and problem resolving, as much at the local level as would be reasonable before needing assistance, or complaints resolution from the FCC.

The qualified individual will:

- a) be trained and certified at an appropriate level for Microbroadcasting service,
- b) be familiar and have a working knowledge with FCC, and its rules and procedures for FM broadcast engineering (Part 73 in general and rules for uB in particular when established),
- c) maintain a telephone directory of broadcasters in the local area, (not for general public) distributed to the local broadcasters, including services that may be at risk of interference outside the FM band (i.e TV channel 6, & aviation). The directory would allow for fast communication among the "key players", resulting in a much faster, less costlier problem isolation and correction - most without needing intervention from the FCC.
- d) maintain an aircheck log, do and/or receive airchecks and log on a regular basis, for the purpose of "proactive" detection of interference and unauthorized transmissions.
- e) be the first "point of contact" for all Microbroadcasting and Special Event services, as defined by the authority and responsibility given to the uBC.

Protection from "domination"

As mentioned earlier, citing "precedent" in a assumed "free market economy", the issue of "dominance" has always created a need for special "checks and balances" safeguards be instituted to prevent one entity (or class of entities) from dominating or monopolizing the market to the point where there's no other participants can compete. Competition, in a positive way is for the benefit of the consumer and the industry as a whole.

Conclusions:

Prepare the broadcast community and the listening public for the arrival and acceptance of this "new kind" of licensed LPFM/uB operator / programmer, via new technology and abilities, delivering quality service, much of it being "volunteer" based, returning more attention back to the local community.

- There have been several generations of technology developed, and vast changes in regulatory attitudes in all areas of communications since FM broadcast went mainstream. Likewise, enhancements in FM are needed and available.
- Technological "Frontiersmen" invented radio - they may very well have to re-invent it - for both the Industry and Public good. The "ratings and advertising dollar model" truly does a fine job in their own right on the "large scale", but has a "natural law" drawback that all large scale entities have-called "maximization of effectiveness via the lowest common denominator". This has the effect of being less concerned for special needs & interests of the local community.
LPFM/uB service is focused on the small scale arena. Innovation and creativity is not as much at the mercy of or as "inhibited" by "risk of lost market share, lost revenue", etc.
- LPFM/uB is not "counter to the interests" of commercial broadcast, but is an enhancement to the "industry" as a whole. Again, citing the continued success of others in other areas in the communications arena, the added diversification fosters improved service via competition as the audience is given more "choice".

The objections voiced by existing broadcasters are "expected". However, as mentioned earlier are "unfounded."

Respectfully Submitted,

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